

Fig.1

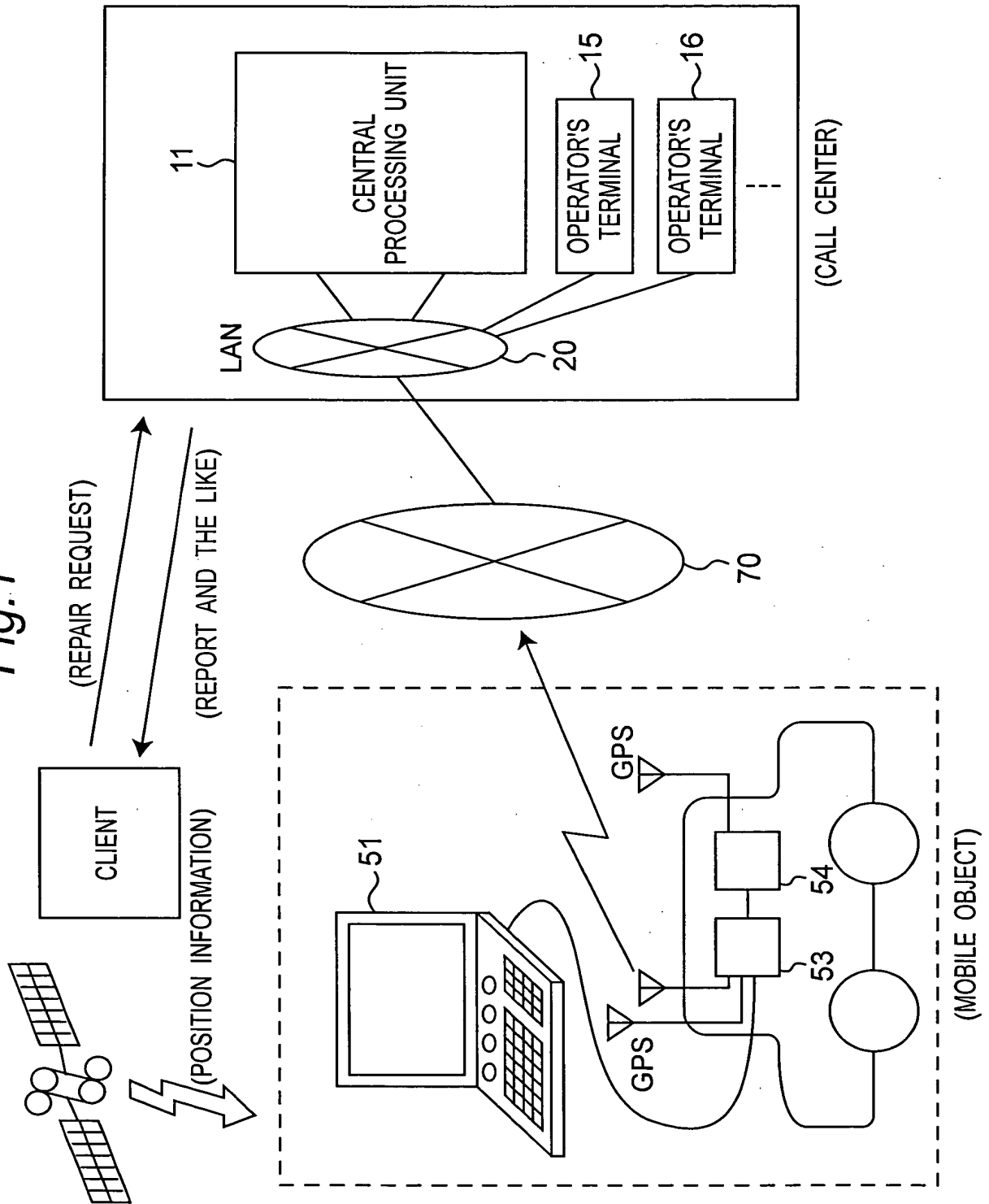


Fig.2

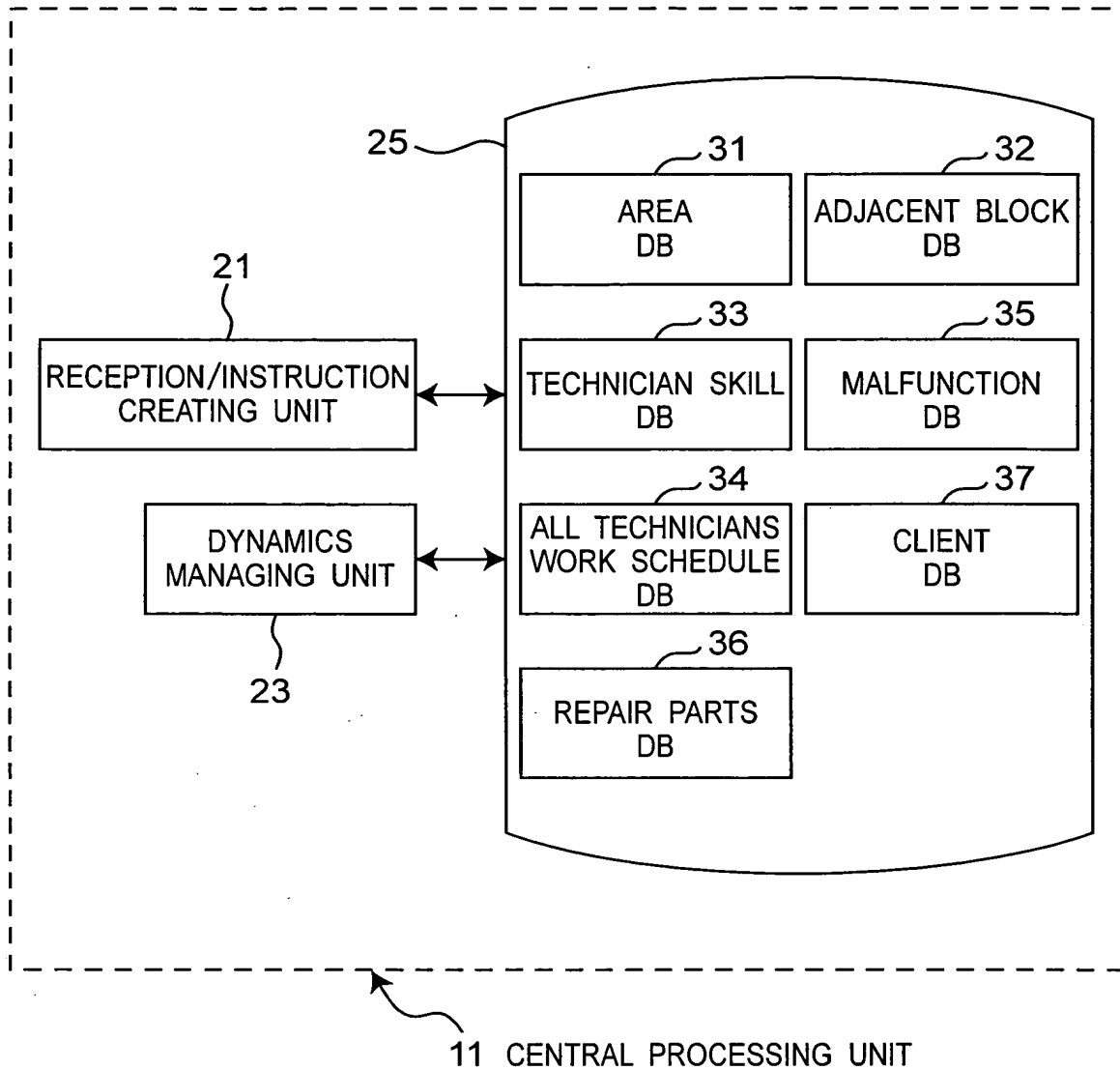


Fig.3

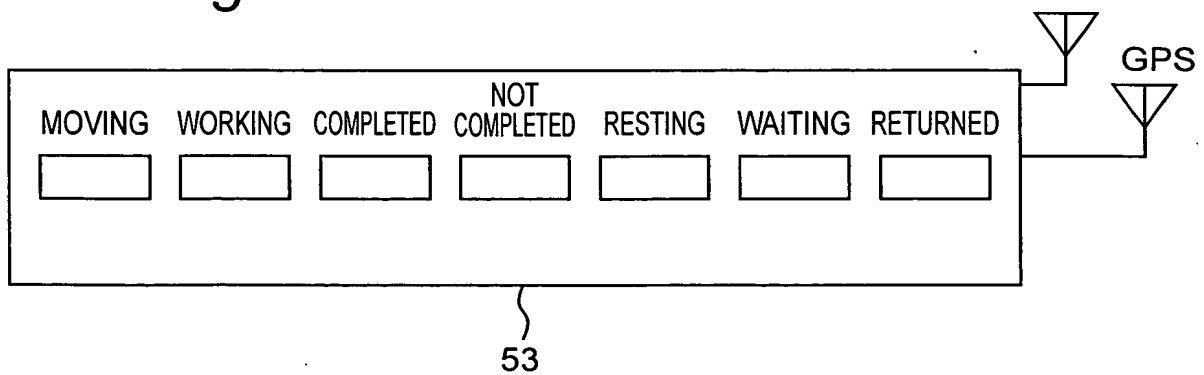


Fig.4A

AREA DATABASE

ZIP CODE	BLOCK	WORKER IN CHARGE				
		OCTOBER 1	OCTOBER 2	OCTOBER 3	...	OCTOBER 30
123-4567	A1	5001(YAMADA) 5002(SUZUKI) 5003(YAMAMOTO)	5001(YAMADA) 5111(SATO) 5003(YAMAMOTO)	5001(YAMADA) 5002(SUZUKI) 5003(YAMAMOTO)	...	5001(YAMADA) 5111(SATO) 5003(YAMAMOTO)
123-4568	A2	5125(UEDA)	5125(UEDA)	5125(UEDA)	...	5125(UEDA)
						...

Fig.4B

ADJACENT BLOCK DATABASE

ZIP CODE	BLOCK	SERVICE BASE POINT	ADJACENT BLOCK		
			BLOCK 1	BLOCK 2	BLOCK 3
123-4567	A1	123	A2	A3	B1
123-4568	A2	456	A1	B2	B3

Fig.4C

TECHNICIAN SKILL DATABASE

TECHNICIAN CODE	WORKER IN CHARGE	CATEGORY	PRODUCT SECTION	PRODUCT NAME	SKILL EVALUATION		
					EXCELLENT	PROPER	IMPROPER
5001	YAMADA	WIRELESS	01	TELEVISION	◎		
		WIRELESS	02	VIDEO SYSTEM	◎		
		WIRELESS	03	HI-VISION	◎		
		ELECTRIFICATION	04	REFRIGERATOR		○	
		ELECTRIFICATION	05	WASHING MACHINE			×

Fig.5A ALL TECHNICIANS WORK DATABASE

TECHNICIAN CODE	TECHNICIAN	AFFILIATION	SECTION	OCTOBER 1			OCTOBER 2			...
				AM	PM	UNDECIDED	TOTAL	AM	PM	
5001	YAMADA	123	PLAN	3	7		10			...
			SCHEDULE RECORD	2	5		7			
5002	SUZUKI	123	PLAN	2	8		10			...
			SCHEDULE RECORD	2	8		10			

Fig.5B MALFUNCTION DATABASE

PRODUCT	CONDITION CODE	CONDITION OF MALFUNCTION	SKILL
TELEVISION	000	REMOTE NOT WORKED	○
	001	REMOTE NOT SENSED	○
	011	POWER NOT TURNED ON	◎
	029	HI-VISION NOT RECEIVED	◎

Fig.5C REPAIR PARTS DATABASE

PRODUCT	MODEL	CONDITION CODE	PART CODE NUMBER	REPAIR COMPLETION PROBABILITY (%)
TELEVISION	A	001	ABCD	40
	A	002	EFGH	18
	B	001	JKLM	25

Fig.5D CLIENT DATABASE

ZIP CODE	NAME	ADDRESS	TELEPHONE	POSITION INFORMATION	PRODUCT 1	PRODUCT 2	PRODUCT 3	...
123-4567	ABCD	KITA-KU OSAKA CITY...	xx-xxx1	(x1, y1)	aaa	bbb	ccc	...
234-5678	vxyz	CHUO-KU OSAKA CITY...	xx-xxx2	(x2, y2)	bbb			...

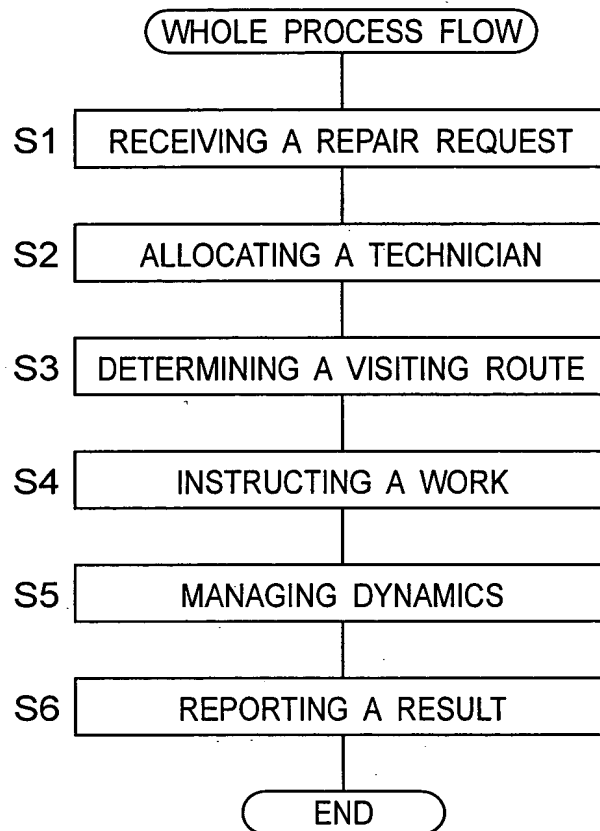
Fig.6

Fig.7

INPUTTED CLIENT INFORMATION

ZIP CODE	REPAIR PART	NAME	ADDRESS	TELEPHONE	MALFUNCTION CONDITION	ERROR STATUS	DESIRED DATE	...
123-4567	ABCD	abc	KITA-KU OSAKA CITY...	xx-xxx1	0001	S1001	2003/10/30	...
234-5678	vxyz	pqr	CHUO-KU OSAKA CITY...	xx-xxx2	0201	A001	2003/10/30	...

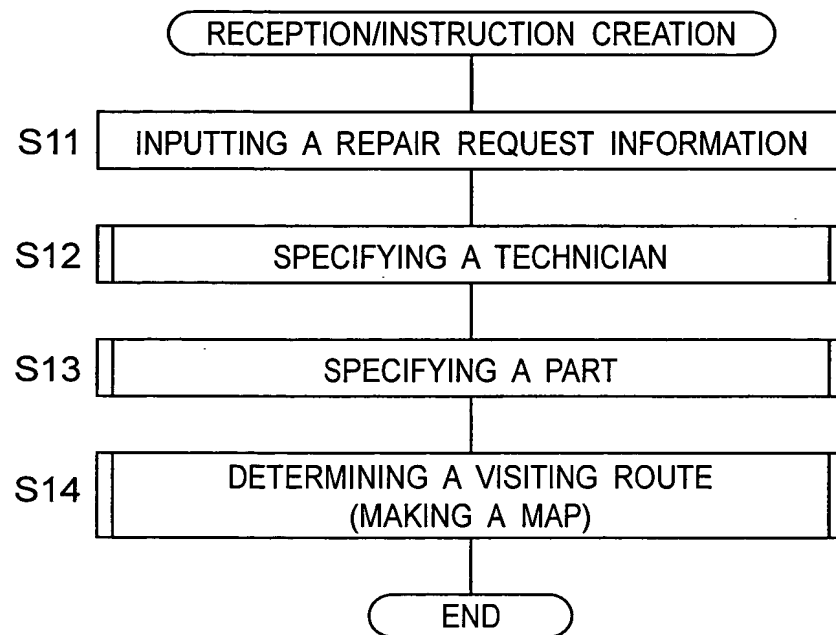
Fig.8

Fig. 9

TELEPHONE RECEPTION INPUT (KINKI DISTRICT)										<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
RECEPTION No.	[RECEPTION DATE AND TIME] 1002 - [0126]		RECEPTION CATEGORY [2] [OCR]		WORK SECTION [1] [ON-SITE]		2003/10/02 01:50				
CLIENT TEL	06-6790-xxxx		CONTACT POINT	[]	CONTACT TELEPHONE NUMBER TEL	[]	EXTENSION NUMBER	[]	RECEPTION PERSON	KYOGO NAKAMURA	
ZIP CODE/T	547 - [0011]		MEMBER TYPE	[]	MEMBER No.	[]	MEMBER TEL	[]	REMOTE PLACE	[]	
ADDRESS	2-2-2 NAGAYOSHI-DO 2 HIRANO-KU 2 OSAKA CITY										
KATAKANA	[]										
NAME	HISAO YAMADA										
TYPE	DL-GX3	TRADE SECTION [49]		TOILET SEAT WARMER AND OTHERS			SELF DIAGNOSIS []				
CONDITION	NO WARM WATER COMES										
CONDITION 2	[084] SHOWER NOT COMES, SHUT OFF										
DESIGNATED DATE	[1] [10/03]	DESIGNATED TIME	[0900] - [1200]	[]	VISIT TEL	[]					
SERVICE AREA	[656] []	OSAKA SC	[]		TECHNICIAN	[686] []	KOZO TANAKA	REQUEST COMPLETION []			
VISITING DAY	[0802] []	VISITING TIME	[] - []	[]	REMARKS	[]	FREE SPACE		FAX-OCR		
MEMO	[]										
RETAILER TEL	[06-6685-xxxx]	RETAILER CODE		[337021]	[A ELECTRIC]		[]				
FAX	[06-6682-xxxx]	ABBREVIATION IN KATAKANA		[EIDENKI]	FAX SECTION [1]						
ORDER No.	[]	PERSON IN CHARGE		[FUJIMOTO]							
URGENCY [O : NORMAL ▼]											

GUIDE REFERENCE	ITEM RETURN	CANCEL	INPUT IN CHARGE	PRINT	DETERMINATION	END
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Fig.10

REPAIR INFORMATION

CREATED DATE	20031023
WORKER IN CHARGE CODE	12345678
WORKER IN CHARGE NAME	MATUSITA
RECEIVED DATE	20031023
RECEIVED TIME	1030
RECEPTION NUMBER	1234567890
MODEL	AB-1234R
CONDITION	MAFUNCTIONING
SERVICE REQUEST	CALL IN THE MORNING
CLIENT TELEPHONE NUMBER	06-1234-5678
CLIENT CONTACT TELEPHONE NUMBER	06-5678-1234
CLIENT CONTACT EXTENSION NUMBER	1234
CLIENT ADDRESS	XX-KU OSAKA CITY
CLIENT ZIP CODE	123-4567
CLIENT NAME	SABURO TANAKA
DESIGNATED VISIT DATE	20031024
DESIGNATED VISIT TIME	1000
RETAILER TELEPHONE NUMBER	06-XXXX-XXXX
RETAILER NAME	ABC ELECTRONIC
RETAILER FAX NUMBER	06-XXXX-XXXX
RETAILER'S PERSON IN CHARGE	UEDA

POSITION INFORMATION (LATITUDE)	N xx° yy' zz"
POSITION INFORMATION (LONGITUDE)	E aa° bb' cc"
PART 1	a123
PART 2	a444
PART 3	c677

Fig. 11

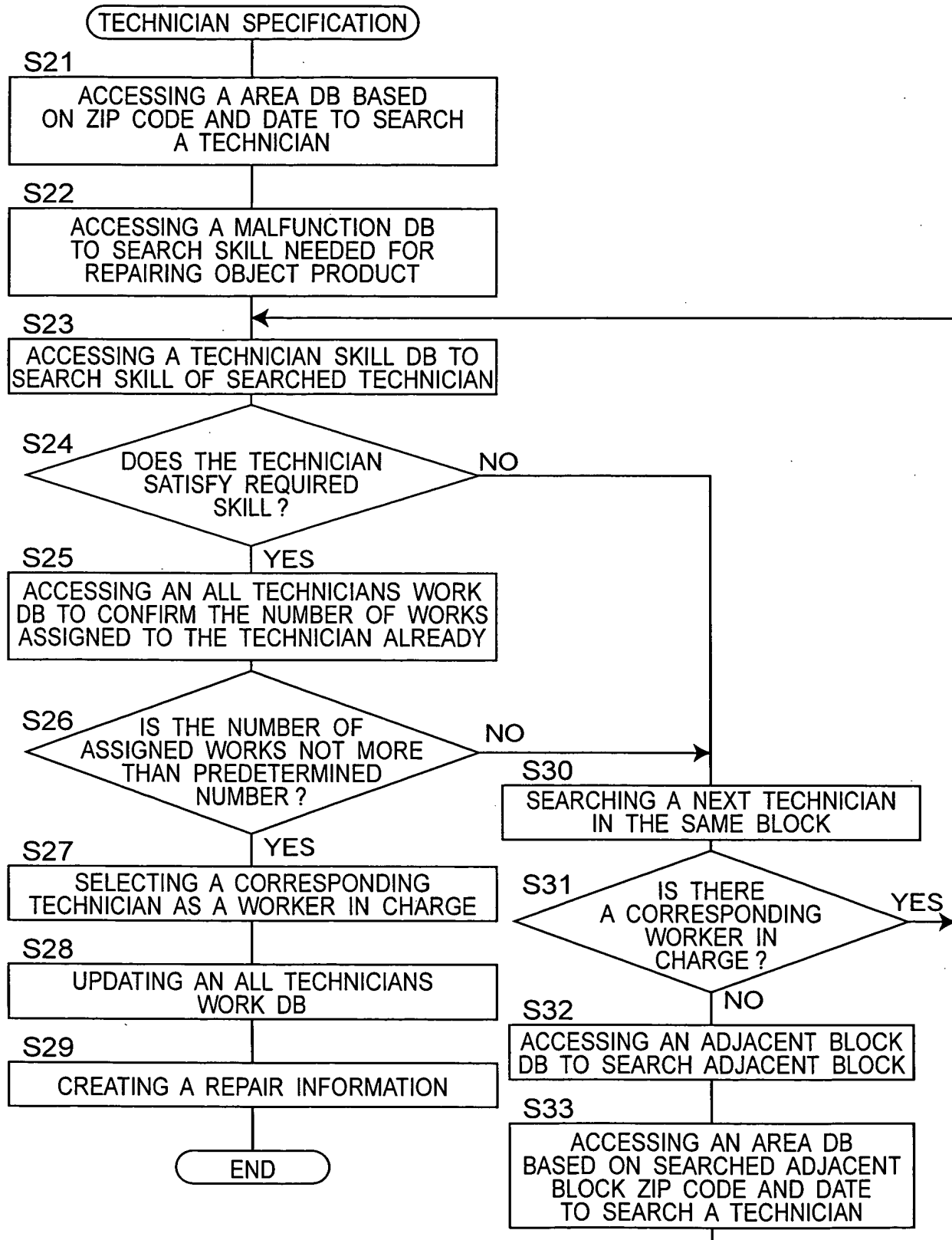


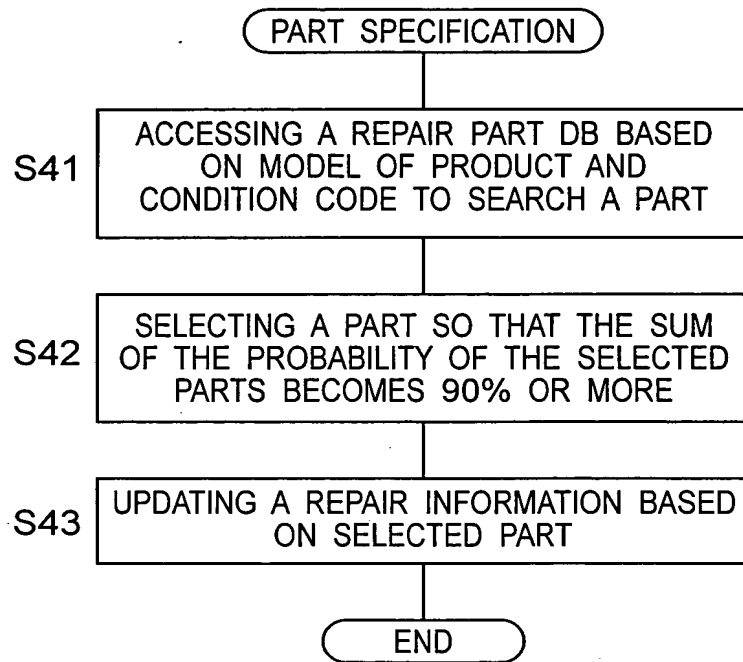
Fig.12

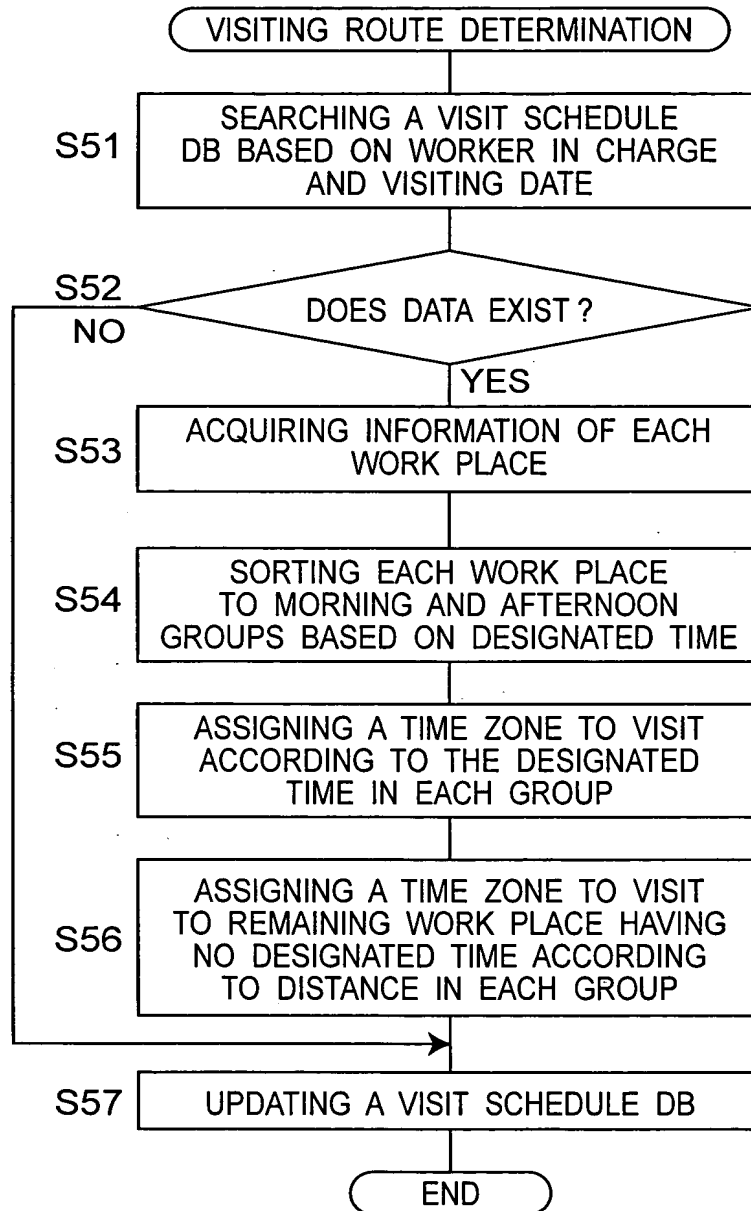
Fig. 13

Fig.14

MAP INFORMATION

WORK PLACE NAME (TEXT)	WORK PLACE ADDRESS (TEXT)	WORK PLACE ADDRESS (LATITUDE AND LONGITUDE)
KAZUO TANAKA	KITA-KU OSAKA CITY...	(X ₁ , Y ₁)
JIRO YAMADA	CHUO-KU OSAKA CITY...	(X ₂ , Y ₂)
⋮	⋮	⋮
TARO SUZUKI	OOAZA-KADOMA KADOMA CITY...	(X _j , Y _j)

↓
VISIT
ORDER

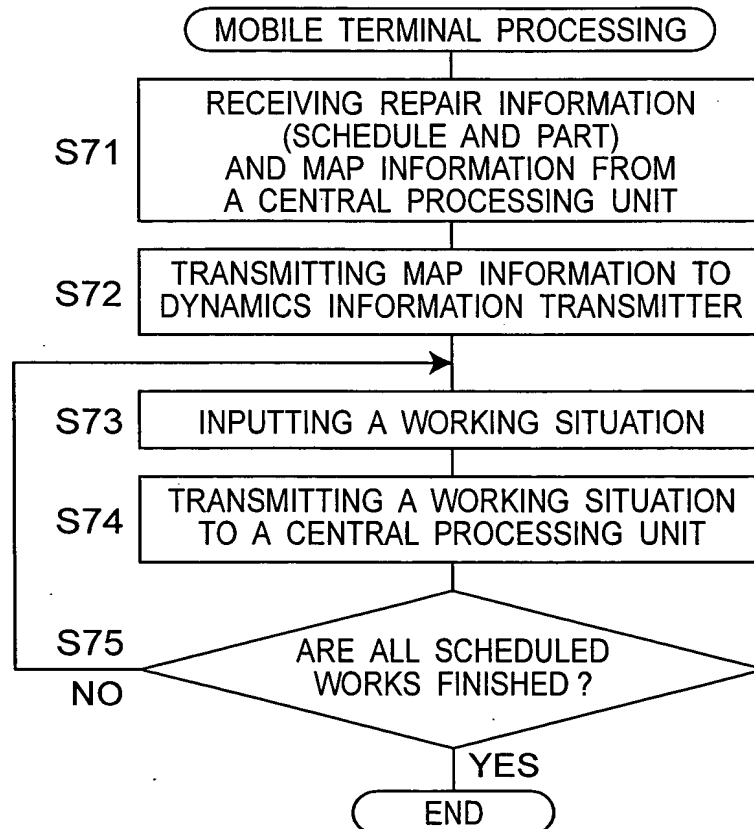
Fig.15

Fig.16

TECHNICIAN SUPPORT SYSTEM						
TECHNICIAN SCHEDULE REFERENCE						
DATE : 03/10/30		PAGE : 1/2				
CODE : 5001						
CLIENT	ADDRESS	TEL	MODEL	SCHEDULE	RECORD	SITUATION
1 TANAKA	CHUO-KU OSAKA CITY	06-6900-0001	NA-FD8000		00:00	E
2 HASHIMOTO	OOKUBO MORIGUCHI CITY	06-6905-0002	CM-K18FHF	09:00	00:00	EC
3 KOBAYASHI	ASAHI-KU OSAKA CITY	06-6920-0003	NR-DL37V1	09:30	00:00	E
.	.	.	.	10:00		
.	.	.	.			
.	.	.	.			
10 FUJITA	TUKIDE-CHO KADOMA CITY	06-6907-0004	NP-P60X1P1	16:00	00:00	E
DETAIL		PROGRESS SITUATION		SITUATION INPUT		RETURN
F1		F5		F9		12

Fig.17

TECHNICIAN SUPPORT SYSTEM			
REPAIR SITUATION REFERENCE		SHEET No. 4548743213	
RECEPTION	03/10/28 09 : 04		
CLIENT	CUSTOMER	TEL	WORKER IN CHARGE
RETAILER	REMARKS	REQUEST No.98S	
CLIENT TEL	0748-23-xxxx	CONTACT POINT	TEL EXTENSION
ADDRESS	SHIROMI CHUO-KU OSAKA CITYxxxx		
NAME	ICHIROU TANAKA		
MODEL	NA-FD8000	WASHING MACHINE	PURCHASE DATE
CONDITION	WATER LEAKAGE FROM BOTTOM, AND WATER IS COLLECTED ON INNER LID.		
S REQUEST	CONFIRM PURCHASE DAY ON SITE, CALL IN THE MORNING FOR ARRANGEMENT		
		DESIGNATED DATE	03/10/30 ~
REPAIR SITUATION		WORKING	1
		SITUATION	
DIRECT ACCOUNT		PRE-ESTIMATION	ESTIMATED AMOUNT ¥0 THOUSAND
MEMO		PURCHASE STORE : HEIWADO	
<div>PROGRESS SITUATION</div>		<div>SITUATION INPUT</div>	<div>LIST</div>
F5		F9	F12

Fig. 18

TECHNICIAN SUPPORT SYSTEM				
PROGRESS SITUATION INPUT <div style="display: flex; justify-content: space-around; font-weight: bold;"> <div>MODEL CS-100BH3H</div> <div>AIR CONDITIONER</div> </div> <div style="display: flex; justify-content: space-around; font-weight: bold;"> <div>CLIENT SUZUKI'S</div> <div></div> </div> <div style="display: flex; justify-content: space-around; font-weight: bold;"> <div>MEMO</div> <div></div> </div>				
DATE	TIME	TIME	COMMENT	BASE POINT NAME INPUT
9/30	17 : 04	CONTACTED	ABOUT 10:30 AM 10/01	643 9562269
9/30	17 : 04	CONTACTED	TEL NEAR ON SITE	643 9562269
<div style="display: flex; justify-content: space-between;"> <div> DATE 9/30 </div> <div> TIME 17 : 04 </div> <div> INPUT 9562269 </div> <div> SITUATION E </div> <div> COMMENT CONTACTED TO A CLIENT </div> <div> VISITING SCHEDULE 10/03 10 : 30 </div> </div>				
<div style="font-size: 0.8em; line-height: 1.2;"> A = DATE DESIGNATION B = CLIENT CONVENIENCE C = NO ANSWER ON TELEPHONE D = STORE CONTACTED E = CLIENT CONTACTED F = ADDRESS UNKNOWN G = RE-VISIT H = GOODS RECEIVED I = COMPLETED J = BENCH K = DIVISION L = WEIGHT M = CONFIRMING N = EVENING DESIGNATED O = TILL SCHEDULE P = AFTER TELEPHONE Q = NOT TOUCHED R = OK S = EXPLANATION T = RE-REPAIR U = CLIENT V = VISITED W = SALES STORE X = DELETION O = DOUBLE-BOOK RECEPTION 1 = PART WAITING 2 = ESTIMATING 3 = CONDITION WAITING 4 = TESTING 5 = GOODS RENTAL 6 = TAKEOUT REPAIR 7 = ABSENCE AND RE-VISIT 8 = CONTACT WAITING 9 = PENDING 10 = VISIT UNCOMPLETED 11 = TECHNICIAN 12 = TIME INFORMED AP = MADE APPOINTMENT </div>				
<div style="display: flex; justify-content: space-between;"> <div> SITUATION V </div> <div> VISITED </div> <div> COMMENT </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div> 5 </div> <div> GOODS RENTAL </div> <div> <div style="border: 1px solid black; padding: 2px; width: 100px; text-align: center;">VIDEO RENTAL</div> </div> </div>				
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px;">CONFIRMATION</div> <div style="border: 1px solid black; padding: 5px;">LIST</div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> F9 F12 </div>				

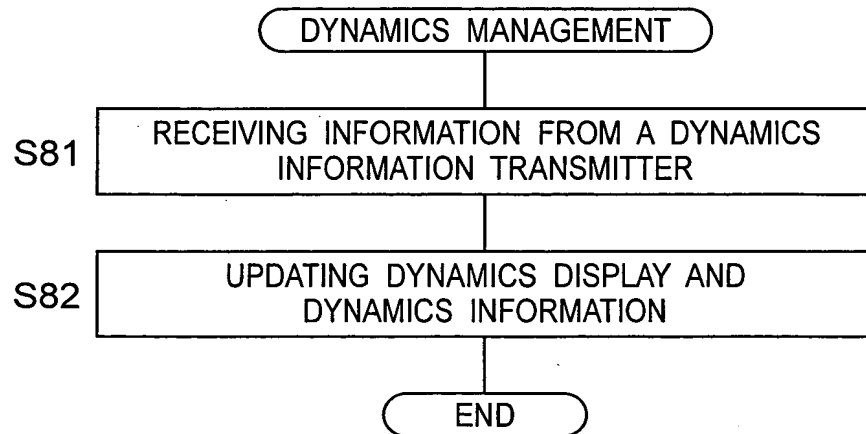
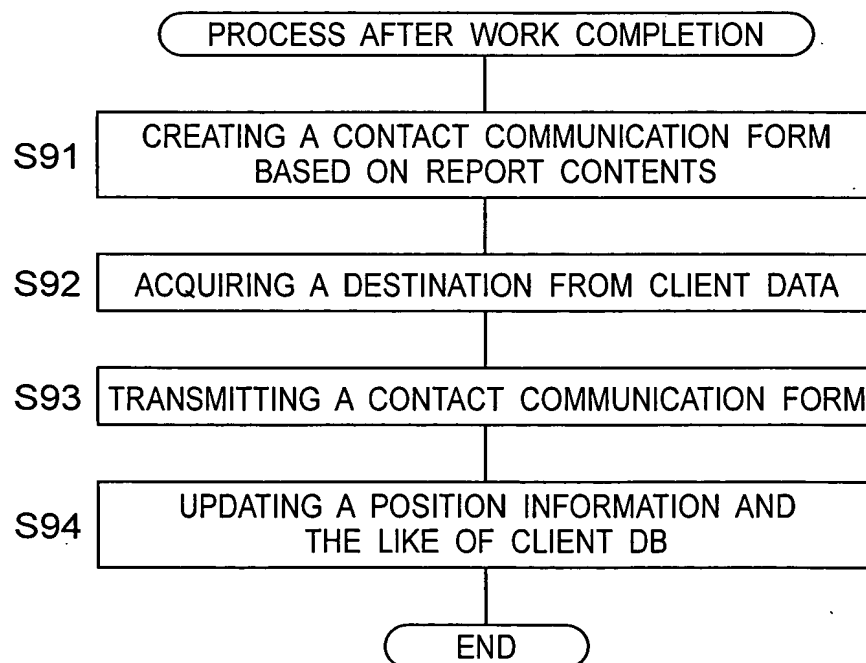
Fig.19*Fig.20*

Fig.21

SITUATION OF THE REPAIR REQUEST IS AS FOLLOWS.

NOTES

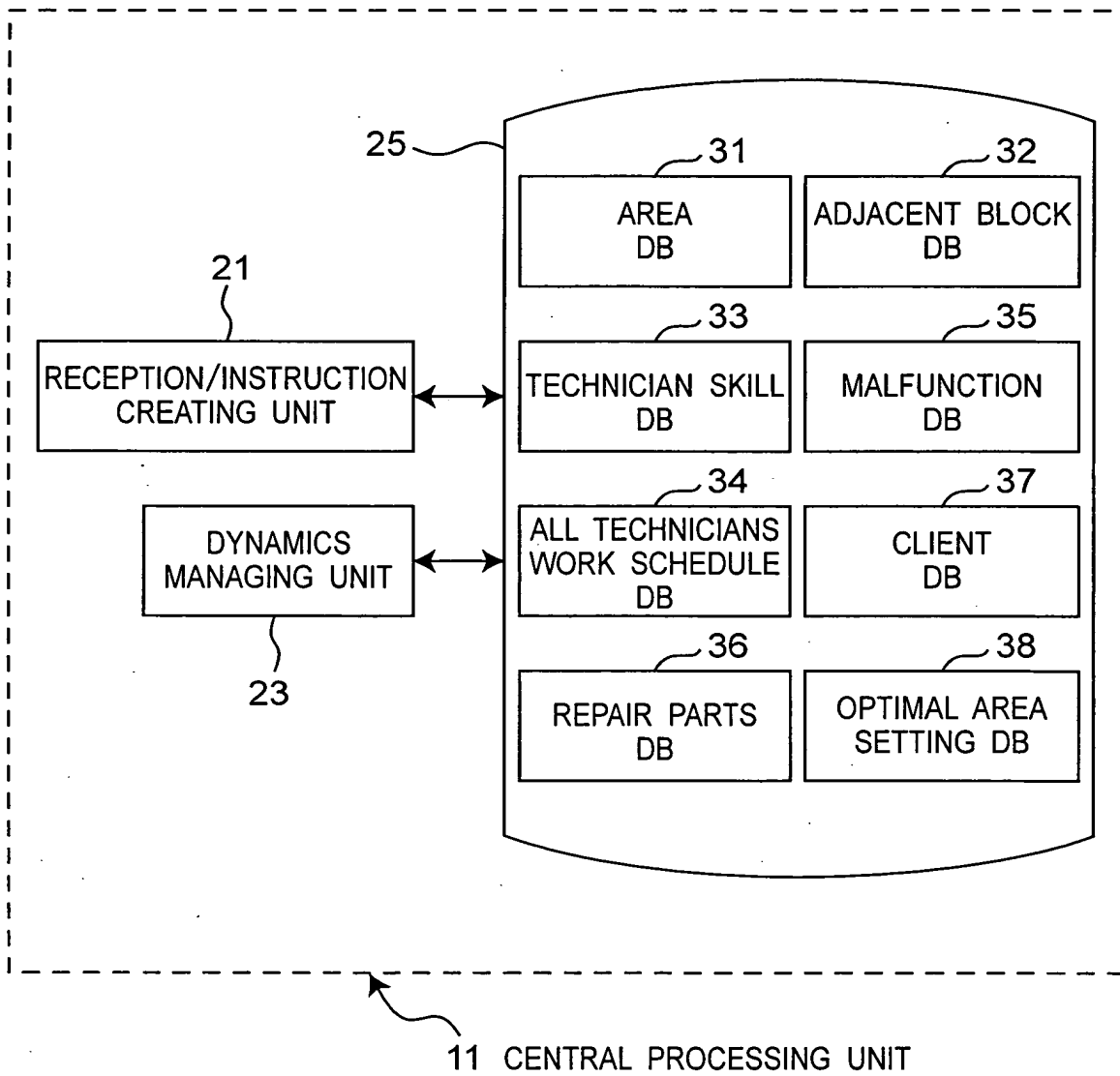
CLIENT NAME : MR. HISAO YAMADA
TEL : 06-6685-XXXX
ADDRESS : NAGAYOSI-IDO HIRANO-KU OSAKA CITY
MODEL : DL-GX3

VISIT DAY : OCTOBER 3
SITUATION : COMPLETED

INQUIRY No. 454-216-8714
KINKI MATSUSHITA TECHNICAL SERVICE CO., LTD.

WORKER IN CHARGE TADASHI MIYAYAMA

Fig.22



OPTIMAL AREA SETTING DATABASE

ZIP CODE	BLOCK	MONTH	WORK RECORD	ADJACENT BLOCK		
				BLOCK 1	BLOCK 2	BLOCK 3
123-4567	A 1	JANUARY	70	A 2	X	X
		FEBRUARY	80	A 2	X	X
	
	
		JULY	1	A 2	B 1	X
		AUGUST	5	A 2	B 1	X
	
	
		DECEMBER	50	A 2	X	X
		JANUARY	80	A 1	A 3	X
123-4667	A 2	FEBRUARY	85	A 1	A 3	X
	
	
		JULY	5	A 1	A 3	B 2
		AUGUST	5	A 1	A 3	B 2
	
	
		DECEMBER	60	A 1	A 3	
		JANUARY	50	A 2	A 4	B 3
		FEBRUARY	45	A 2	A 4	B 3
123-4767	A 3
	
		JULY	80	A 2	A 4	B 3
		AUGUST	80	A 2	A 4	B 3
	
	
		DECEMBER	50	A 2	A 4	B 3
	
	
		DECEMBER	50	A 2	A 4	B 3

Fig. 23

Fig.24

MONTHLY WORK RECORD

	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
A 1	70	80	30	10	5	5	1	5	5	5	30	50
A 2	80	85	30	5	10	10	5	5	10	10	40	60
.
.
.
E 4	30	25	20	5	5	5	10	80	60	15	10	20
E 5	20	20	15	1	1	5	10	70	40	10	5	15

Fig. 25

ZIP CODE 123-4567 BLOCK A 1	ZIP CODE 123-4568 BLOCK B 1	ZIP CODE 123-4569 BLOCK C 1	ZIP CODE 123-4570 BLOCK D 1	ZIP CODE 123-4571 BLOCK E 1
ZIP CODE 123-4667 BLOCK A 2	ZIP CODE 123-4668 BLOCK B 2	ZIP CODE 123-4669 BLOCK C 2	ZIP CODE 123-4670 BLOCK D 2	ZIP CODE 123-4671 BLOCK E 2
ZIP CODE 123-4767 BLOCK A 3	ZIP CODE 123-4768 BLOCK B 3	ZIP CODE 123-4769 BLOCK C 3	ZIP CODE 123-4770 BLOCK D 3	ZIP CODE 123-4771 BLOCK E 3
ZIP CODE 123-4867 BLOCK A 4	ZIP CODE 123-4868 BLOCK B 4	ZIP CODE 123-4869 BLOCK C 4	ZIP CODE 123-4870 BLOCK D 4	ZIP CODE 123-4871 BLOCK E 4
ZIP CODE 123-4967 BLOCK A 5	ZIP CODE 123-4968 BLOCK B 5	ZIP CODE 123-4969 BLOCK C 5	ZIP CODE 123-4970 BLOCK D 5	ZIP CODE 123-4971 BLOCK E 5

Fig.26A

A1	B1	C1		D1	E1
A2	B2	C2		D2	E2
A3	B3	C3	D3		E3
A4	B4	C4	D4		E4
	B5	C5	D5		E5
A5					

Fig.26B

A1		B1	C1		D1	E1
A2		B2	C2		D2	E2
A3	B3		C3	D3		E3
A4	B4		C4	D4		E4
	B5		C5	D5		E5
A5						

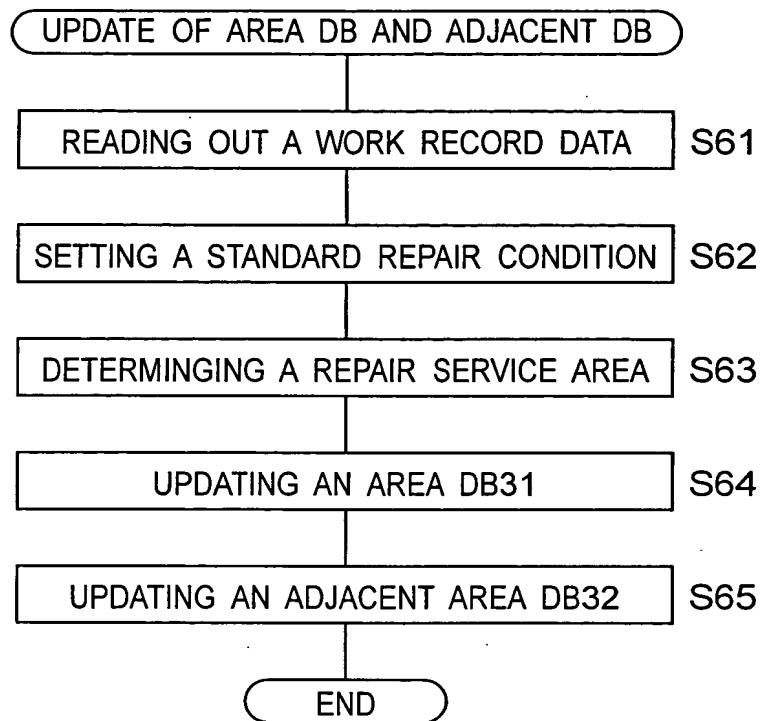
Fig.27

Fig.28

A1	B1	C1		D1	E1
A2	B2	C2		D2	E2
A3	B3	C3	D3		E3
A4	B4	C4	D4		E4
	B5	C5	D5		E5
A5					

Fig. 29

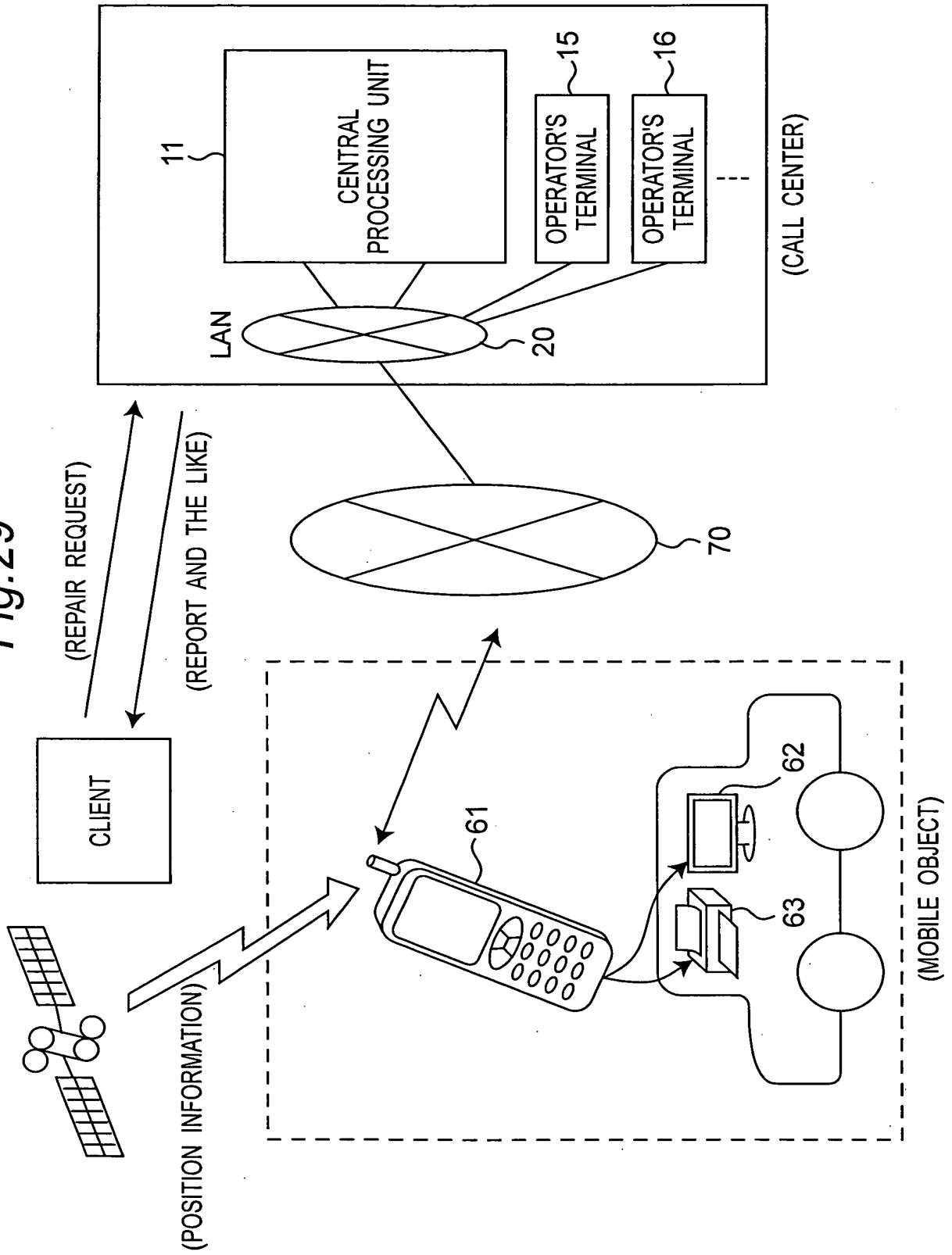


Fig.30